

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.,
Petitioner,

v.

HEADWATER RESEARCH LLC,
Patent Owner

Case IPR2023-01336
Patent 9,137,701

PETITIONER'S REPLY TO
PATENT OWNER'S PRELIMINARY RESPONSE

EXHIBITS

SAMSUNG-1001	U.S. Patent No. 9,137,701 to Raleigh, et al. (“the ‘701 Patent”)
SAMSUNG-1002	Excerpts from the Prosecution History of the ‘701 Patent (“the Prosecution History”)
SAMSUNG-1003	Declaration and Curriculum Vitae of Patrick McDaniel
SAMSUNG-1004	Complaint, <i>Headwater Research LLC v. Samsung Electronics Co., Ltd. et al.</i> , 2:22-cv-00422, E.D. Tex., October 26, 2022
SAMSUNG-1005	U.S. Pat. App. Pub. No. 2006/0039354 (“Rao”)
SAMSUNG-1006	U.S. Pat. App. Pub. No. 2007/0038763 (“Oestvall”)
SAMSUNG-1007	U.S. Pat. App. Pub. No. 2009/0207817 (“Montemurro”)
SAMSUNG-1008	RESERVED
SAMSUNG-1009	U.S. Pat. App. Pub. No. 2008/0080458 (“Cole”)
SAMSUNG-1010	U.S. Pat. No. 5,987,611 (“Freund”)
SAMSUNG-1011	U.S. Pat. App. Pub. No. 2009/0217065 (“Araujo”)
SAMSUNG-1012	RESERVED
SAMSUNG-1013	U.S. Pat. No. 8,381,127 (“Singh”)
SAMSUNG-1014	U.S. Pat. App. Pub. No. 2007/0173283A1 (“Livet”)
SAMSUNG-1015	U.S. Pat. No. 8,413,172 (“Sng”)

SAMSUNG-1016	Flinn, Jason, et al. “The case for intentional networking,” Proceedings of the 10th Workshop on Mobile Computing Systems and Applications, 2009 (“Flinn”)
SAMSUNG-1017	Carter, Casey et al., “Contact networking: a localized mobility system,” Proceedings of the 1st International Conference on Mobile systems, Applications and Services, 2003 (“Carter”)
SAMSUNG-1018	RESERVED
SAMSUNG-1019	U.S. Pat. App. Pub. No. 2009/0019022 (“Schallert”)
SAMSUNG-1020	David Flanagan, O’Reilly & Associates, Inc., “Java in a Nutshell,” 1996, ISBN: I-56592-183-6
SAMSUNG-1021	W. Richard Stevens, et. al, “UNIX Network Programming Volume 1, Third Edition: The Sockets Networking API,” 2004, ISBN: 0-13-141155-1
SAMSUNG-1022	U.S. Pat. App. Pub. No. 2009/0093247 (“Srinivasan”)
SAMSUNG-1023	U.S. Pat. App. Pub. No. 2008/0311897 (“Segal”)
SAMSUNG-1024	Buxton, B., “Integrating the Periphery and Context: A New Model of Telematics,” in Proceedings of Graphics Interface ’95, 1995
SAMSUNG-1025	Hinckley et. al, “Foreground and background interaction with sensor-enhanced mobile devices,” ACM Trans. Comput. Hum. Interact., vol. 12, no. 1, pp. 31–52, Mar. 2005
SAMSUNG-1026	International Publication No. WO 03/100581 (“Dive-Reclus”)
SAMSUNG-1027	U.S. Pat. No. 7,757,185 (“Paquette”)

SAMSUNG-1028	Westerinen, et al., IETF RFC 3198, Terminology for Policy-Based Management, November 2001, available at https://www.ietf.org/rfc/rfc3198.txt
SAMSUNG-1029	Durham, et. al., IETF RFC 2748, “The COPS (Common Open Policy Service) Protocol,” January 2000, downloaded from the internet at https://www.rfc-editor.org/rfc/rfc2748.html on August 1, 2023
SAMSUNG-1030	First Amended Docket Control Order, <i>Headwater Research LLC v. Samsung Electronics Co., Ltd. et al.</i> , 2:22-cv-00422, E.D. Tex., April 21, 2023
SAMSUNG-1031	Memorandum, Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation (USPTO June 21, 2022) (“Director’s Guidance”)
SAMSUNG-1032	Samsung Stipulation letter regarding IPR grounds in District court litigation
SAMSUNG-1033	First Amended Complaint, <i>Headwater Research LLC v. Samsung Electronics Co., Ltd. et al.</i> , 2:22-cv-00422, E.D. Tex., November 30, 2022
SAMSUNG-1034	W. Richard Stevens, UNIX Network Programming, Prentice Hall, 1990
SAMSUNG-1035	A. Freier, et al., The Secure Sockets Layer (SSL) Protocol Version 3.0, Internet Engineering Task Force (IETF), Request for Comments: 6101, ISSN: 2070-1721, August 2011, available at https://datatracker.ietf.org/doc/html/rfc6101
SAMSUNG-1036	Email from Board dated January 22, 2024 authorizing Petitioner’s Reply to Patent Owner’s Preliminary Response

TABLE OF CONTENTS

I.	THE PETITION APPLIES PRIOR ART AND COMBINATIONS NOT PREVIOUSLY PRESENTED IN EXAMINATION.....	1
II.	THE EXAMINER ERRED REGARDING PATENTABILITY	4

Headwater's § 325(d) argument primarily focuses on the Petition's reliance on Rao, Oestvall, and Montemurro, which Headwater alleges are cumulative of references cited in signed IDSs during prosecution. But this ignores that the '701 patent was allowed without the Office issuing *any* prior art rejection—a fact that several Board decisions confirm is insufficient to support discretionary denial under Section 325(d). *See, e.g., Navistar, Inc. v. Fatigue Fracture Tech., LLC*, IPR2018-00853, Pap. 13, 17 (PTAB Sept. 12, 2018); *see* IPR2017-00178, Pap. 6, 12-13 (PTAB 2017); IPR2023-01157, Pap. 9, 7 (PTAB 2024).

I. THE PETITION APPLIES PRIOR ART AND COMBINATIONS NOT PREVIOUSLY PRESENTED IN EXAMINATION

Headwater argues that Rao and Oestvall are cumulative of Rao-2. POPR, 31-44. Headwater also argues that Montemurro was previously considered because its later-issued patent ("Montemurro-2") was cited in an IDS. *Id.* While Rao-2 and Montemurro-2 were cited in IDSs, no evidence exists on the record that the Office in fact considered either. Indeed, the Office issued no rejections during prosecution. SAMSUNG-1002, 21. Moreover, all grounds advanced in the Petition include references (e.g., Oestvall, Araujo) and combinations not presented to the Office.

Headwater's argument that Oestvall is cumulative of Rao-2 (POPR, 35-42) is flawed. The Office did not consider Oestvall during prosecution. Pet., 4, 77-78; SAMSUNG-1001, Cover. The Petition explains that Oestvall's teachings would

have provided a POSITA with motivations to improve Rao's techniques. Pet., 12-16. These motivations are necessarily absent from Rao (and Rao-2), and the Office could not have considered these motivations and resulting combination without Oestvall. Headwater fails to address how the *combination* of references in the Petition is similar to any combination considered during prosecution.

Headwater's argument that Oestvall is "cumulative and substantially similar" to Rao because the Petition relies upon both Oestvall and Rao as teaching certain claim features (POPR, 34-38, 40-42) is also flawed because it overlooks the Petition's reliance on Oestvall as *supplementing* Rao at least with respect to "selectively block[ing] and allow[ing] access by the first end-user application to the WWAN modem." Pet. 29-30, 34-35. More, Headwater's argument fails to recognize that two references with different disclosures can both disclose a claimed feature due to the breadth of the claim language, and that such disclosure does not render two references "cumulative." Indeed, Headwater's flawed argument is evidenced by its reliance on only select disclosure of generic and well-known concepts, such as (1) foreground/background applications, (2) APIs, and (3) WWAN modem connections to WWANs. POPR, 33-38, 40.

Further, Oestvall is not "cumulative of and substantively similar to" Judge or Nicolas. POPR, 36-41. Contrary to Headwater's mischaracterization of the prosecution history, Judge and Nicholas are merely listed as "[p]rior art," not the

“*closest* prior art.” POPR, 36-41; SAMSUNG-1002, 322. More importantly, the Examiner offered no discussion of them. *Id.* By selectively choosing portions of Judge, Headwater characterizes Judge’s “multiple server access modules (SAM)” operation as depending on whether applications are “supported” and alleges this to be cumulative of Oestvall’s disclosure of a “scheduler” that regulates access to resources by an untrusted application. POPR, 38-40. However, Headwater neglects the Petition’s reliance on Oestvall as disclosing that its scheduler regulates an untrusted application’s access to resources *depending on whether the application runs in the background or foreground*, failing to address how Judge or Nicholas teach this. *Id.*; Pet., 29-30; SAMSUNG-1006, [0023]-[0025]. Indeed, Headwater’s “cumulative” argument relates only to a small portion of limitation [1e] (“selectively block and allow access by the first end-user application”), thereby confirming that the alleged overlap between Oestvall and Judge is limited. POPR, 39-40. Similarly, Headwater identifies Nicholas’s disclosure of “power management” as the sole aspect cumulative of Oestvall (POPR, 40-41) but fails to address how Nicholas provides a teaching cumulative of Oestvall’s core disclosure of battery conservation by managing access to system resources. SAMSUNG-1006, [0008]-[0009], [0016]-[0017]. Rather, Headwater acknowledges the only similarity between Oestvall and Nicolas—“battery conservation” (Oestvall) and “power management” (Nicolas)—relates to a “basic concept.” POPR, 40-41. Notably, the battery conservation theory

is just one of many reasons for the Petition’s combination with Oestvall. Pet., 12-16, 31-33. For at least these reasons, Headwater has not shown that part one of the *Advanced Bionics* framework is met.

II. THE EXAMINER ERRED REGARDING PATENTABILITY

The Office erred in a manner material to the patentability of challenged claims. The relevant facts here are nearly identical to those in related *Samsung Elecs. Co. Ltd. v. Headwater Rsch. LLC* (“01157 IPR”). IPR2023-01157, Pap. 9, 7. In both cases, the prosecution history was limited—during prosecution of the patent at issue in the 01157 IPR, the Office issued no rejections relying on the alleged cumulative art, while here the Examiner issued no prior art rejections at all. *Id.*; Pet., 18-19, 112; SAMSUNG-1002. In the 01157 IPR, the Board observed that “the record developed by the office is sparse because Cole and Rao were two of about 1,800 references identified in [IDSs], but never discussed substantively during prosecution, and D’Amore was not before the Office.” IPR2023-01157, Pap. 9, 7. The same holds true here, where, “[i]n light of that sparse record, Petitioner’s showing on the merits is enough to demonstrate that the examiner erred.” *Id.* In particular, “to the extent that the examiner substantively considered Rao [and one or more references cumulative of Oestvall] as a combination and concluded that the combination does not teach [elements [1d]-[1g]], the examiner materially erred.” *Id.* Instead, as the Petition explains, for example, the asserted combination teaches elements [1e]-[1g]

at least in view of Oestvall’s teaching that, “when an untrusted application runs in the background, Oestvall’s device prevents the application from ‘being given any services or consuming any resources,’” and when it “runs in the foreground, the application is permitted to ‘run again—e.g., to be provided with resources and services.’” Pet., 29-35 (citing SAMSUNG-1006, [0023]-[0025]); *see* IPR2023-01157, Pap. 9, 7-8. In light of the Petition’s analysis, Petitioner has shown under part two of the *Advanced Bionics* framework that the Office materially erred.

Headwater’s cited authority regarding the *Advanced Bionics* framework is distinguishable. *See* POPR, 45-46. In *Eyenovia*, prosecution of the challenged patent included substantive prior art rejections and patent owner’s discussion of those references, and the Board found a “significant overlap between the arguments considered by the Examiner during prosecution and Petitioner’s grounds in this proceeding.” IPR2022-00963, Pap. 7, 13 (PTAB 2022). No such overlap exists here. Likewise, in *Gator Bio*, the asserted prior art references were “applied extensively during examination of the parent application,” including rejections based on those references. IPR2023-00215, Pap. 19, 12 (PTAB 2023). The same is not true here. Thus, Headwater is unable to identify any authority finding that the second part of the *Advanced Bionics* framework is satisfied where the prosecution history lacks any indication that the Examiner evaluated the asserted prior art references. *See* IPR2023-01157, Pap. 9, 7.

Respectfully submitted,

Date: February 5, 2024

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CERTIFICATE OF SERVICE

Pursuant to 37 CFR §§ 42.6(e)(4) and 42.205(b), the undersigned certifies that on February 5, 2024, a complete and entire copy of this Petitioner's Reply to Patent Owner's Preliminary Response and Exhibit 1036 were provided by email to the Patent Owner by serving the correspondence address of record as follows:

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